1046-11-398   **Maria J Monks*** (`monks@mit.edu`), 290 Massachusetts Avenue, Cambridge, MA 02139. *Number theoretic properties of generating functions related to Dyson's rank for partitions into distinct parts.*

Let $Q(n)$ denote the number of partitions of n into distinct parts. We show that Dyson's rank provides a combinatorial interpretation of the well-known fact that $Q(n)$ is almost always divisible by 4. This interpretation gives rise to a new false theta function identity that reveals surprising analytic properties of one of Ramanujan's mock theta functions, which in turn gives generating functions for values of certain Dirichlet L-functions at non-positive integers. (Received August 31, 2008)